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Brooklyn Botanic Garden and Sustainability

By Andy Liu

What have you heard about the climate lately? Regardless of pollution laws or renewable energy, environmental issues have certainly been a contentious debate amongst politicians and citizens. This year, unprecedented numbers of heat advisories and unsteady torrential downpours in NYC show how the environment is continuously changing. There is a growing concern that pollution, carbon emissions and deforestation are pushing this negative environmental impact to

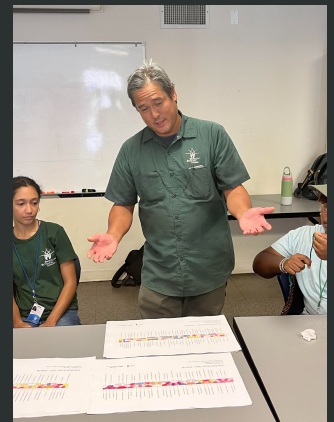
irrevocable levels. The goal of urban botanical gardens is to emphasize sustainability. The Brooklyn Botanic Garden (BBG) was established in 1911 to preserve green spaces and conserve species as Brooklyn urbanized. Sustainability's importance is seen at BBG through environmental education, conservation, and community greenification initiatives. For example, BBG's Community Greening Program, runs the friendly "Greenest Block in Brooklyn" competition and has generated yearly

initiatives to plant more trees, bushes, and flowers. BBG's conservatory preserves historical plants over 200 years old, and the Japanese Garden is home to hundreds of different species. Spanning 52 acres, BBG effectively promotes sustainability and biodiversity in the urban space of NYC. Through its efforts, the garden encourages kids, teenagers and adults to participate in combating prevailing climate change through actions that can be impactful both locally and internationally.

Workshop with Wayken

By Andy Liu

Wayken's role at BBG is curating and maintaining the Lily Pool Terrace's water pools and perennial and annual borders, as well as the Magnolia Plaza. Wayken utilizes his urban architecture background, which emphasizes efficiency and sustainability, to design the Water Pool Terrace's borders annually. In 2018 he dedicated the Terrace's tulip bed design to the birth of his daughter by strategically planting colored tulips to look like DNA strands in her honor.



Wayken demonstrates how he uses a map to create designs for the Lily Pool Terrace's tulip beds each year.

The Unknown Beauty of the BBG

By Ihaka Copelin

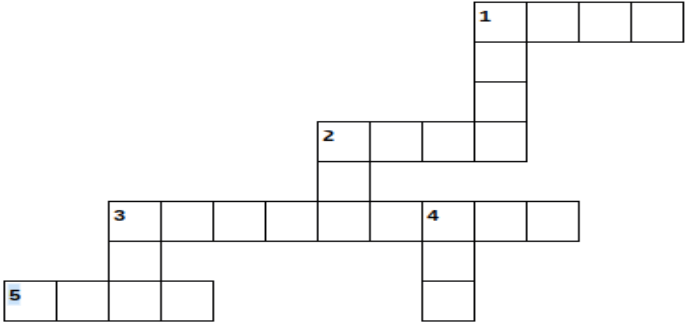
The Brooklyn Botanic Garden, with its numerous moving parts, is a notable part of Brooklyn. Within the garden, there is much that goes unappreciated or unnoticed. The Native Flora Garden gets little attention due to its somewhat hidden location, yet it is one of the more beautiful parts of the garden. The Native Flora Garden is one of the only gardens that feels wild. Where other gardens feel like a collection of plants, the Native Flora Garden feels like nature was left to run its course. Along handmade wooden fences, you'll find pieces of history. This garden explores the connection between the nation's first people and nature. It tells the stories of how they used nature to navigate the world around them. You'll also find there a multitude of endangered native plants, such as the American Chestnut.



Pollinators help not only humans but the world as a whole. The term “pollinators” is a wide umbrella consisting of bees, birds, wasps, beetles, and surprisingly moths, as well as some other small mammals (bats, bears, rabbits, deer, and most monkeys). Unfortunately in recent years, the population of our native pollinators has been declining.

More than half of native pollinators are at risk of disappearing from New York State. This is due to air pollution and habitat loss. However, the Brooklyn Botanic Garden looks to combat this issue with its new functional art exhibit, the Pollinator Lounge. Architects Joyce Hwang and Nerea Feliz and their students from the University of Buffalo and University of Texas led this un-bee-lievable art installation.

This spectrum of original and operational insect homes cater to a large variety of pollinators. They explore the needs of each insect and incorporate them into geometric works of art. These designers adapt to the tiniest clients by including UV paint (since most insects navigate the world with UV vision), the use of which invokes an otherworldly point of view.



Down

- 1. A strong force of nature, the movement of air
- 2. This hard worker makes honey
- 3. A nocturnal flighted friend that may or may not be a vampire
- 4. This unlikely pollinator is attracted to stinky flowers

Across

- 1. This pollinator prefers their personal space and can sting multiple times
- 2. Feathered and winged, this pollinator sings
- 3. This pollinator is known for its big and colorful wings
- 5. You may find this pollinator in your closet

Role of Education Towards Sustainability

By Andy Liu

Education is a pivotal step towards understanding sustainability. The effort would develop a generation that emphasizes eco-friendly systems and sustainability awareness. For example, recognizing the impact of reusing, reducing, and recycling is something that students are taught about even in primary school. An initiative towards educating sustainability is essential.

In the Brooklyn Botanic Garden, many activities for children familiarize them with being in nature in a world progressively rejecting the significance of outdoor activities. These programs develop an understanding of horticultural practices while teenager professional development programs conduct creative projects. In the Garden Apprentice program, teenagers of diverse

backgrounds gather to construct environmentally focused initiatives. In the summer of 2023, apprentices built beds that grew different vegetables. Similarly, this year, they are working on numerous environmental awareness actions through different mediums like editorials, photography, and sculptures. Furthermore, apprentices are involved in the Children's Garden to assist children's development and create cart presentations on topics like urban design's contribution to sustainability. Through educational efforts, a generation focused on sustainability would be

impactful. Programs that the garden establishes encourage leadership and commitment to beautifying the community. Educational authorities have enforced events like Climate Action Days in NYC to enforce awareness as the climate continues to worsen. Education on environmental impacts coincides with other justice-based initiatives. For example, it's generally the poor citizens who experience the effects of extreme climates. Enforcing awareness of sustainability would also familiarize the community with other issues and help them develop their professional career path.

SPOTLIGHTING: THE JAPANESE GARDEN

One of the oldest parts of BBG, the Japanese Garden features natural hills and a pond in the middle. In 1914, Takeo Shioda structured the garden to empower Japanese culture featuring traditional architecture like the Shinto Shrine, lanterns, and cherry blossoms. The Japanese garden is the only asymmetrically designed place in the garden and represents a sense of serenity as visitors hear the waterfall and gravel with each step.



The Botanic Garden

By Victoria Louissaint

In Brooklyn's heart, a tranquil space.
Where the city's pulse and nature's grace intertwine in soft daylight.
A garden whispers pure delight.
Petals bloom, a vibrant spree,
dancing with the ancient tree.
Roses blush and lilies gleam,

In this haven, find your dreams.

Little Caribbean Garden

By Osei Alfred

Within the Botanic Garden, we have an entire garden dedicated to the Caribbean islands' numerous plants. The Little Caribbean Garden serves as an educational resource for both children and adults. It provides a hands-on learning experience where visitors can explore the plants up close, learn about their uses, and understand their ecological significance. This is particularly valuable in an urban environment like Brooklyn, where many residents may not have regular access to green spaces or knowledge of tropical plant species. The garden's educational programs,

Continuum Company vs The BBG

By Osei Alfred

Currently, the Continuum Company threatens the wellbeing of the Brooklyn Botanic Garden. The Continuum Company has applied to construct a building that would obstruct sunlight from properly reaching the nursery and conservatory portions of the garden. This

Water lilies drift so light,
On ponds reflecting calm and night.
Each step, a gentle, peaceful quest.
In Brooklyn's garden, hearts find rest.



The Discovery Garden

By Victoria Louissaint

In the discovery garden we little children, find their joy

Together they discover, play, have fun

At the discovery garden, the children find their peace

A place where young souls learn and get curious about nature

workshops, and guided tours help to bridge this gap, offering invaluable lessons in botany, ecology, and cultural history. The plants of the Little Caribbean are not just beautiful to look at; they also hold deep cultural and medicinal significance. Many Caribbean plants have been used for centuries in traditional medicine, cooking, and religious practices. For example, plants like aloe vera, ginger, and moringa have long been used in Caribbean folk medicine for their healing properties. By including these plants in the Brooklyn Botanic Garden, the exhibit helps to educate the public about the cultural importance of these species and the ways they have been used to maintain health and wellness in Caribbean communities. In addition to preserving and educating, the Little Caribbean garden also plays a role in promoting environmental awareness. As visitors explore the diverse array of plants, they are encouraged to think about the broader environmental issues that affect both the Caribbean and the world at large. The exhibit can inspire visitors to take action in their own lives, whether by adopting more sustainable practices, supporting conservation efforts, or simply appreciating the natural world in a deeper way. As a symbol of cultural pride and environmental stewardship, the Little Caribbean Garden is an essential part of Brooklyn's landscape, offering a space where nature, culture, and community come together in a celebration of life.

would prevent the growth of certain exotic plants and lead to the death of several others. The Brooklyn Botanic Garden is an opportunity for the youths' love for nature to grow, thus destroying this garden would lead to a new generation not realizing the beauty of nature.



The Cherry Blossom

By Victoria Louissaint

In the botanic garden's light,
Cherry Blossoms petals fall, by the breeze,

their petals are so soft and pretty,

under the cherry blossoms people find their peace and tranquility,

Interviewing Barbara Kurland: Learning Director & Sustainability

By Andy Liu

Barbara Kurland is the director of school and teaching programs and partnerships with other institutions like museums and aquariums. In an interview, I further inquired about the Botanic Garden system's role beyond science education. Remarkably, many instructors and teachers from schools nearby utilize the garden as a space to teach students math lessons! The garden emphasizes scientific research, but there are many other ways in which it contributes towards sustainability. For example, the Visitor Center is LEED gold certified (a rating system that determines the sustainability and commitment to environmentalism of a building) for architectural construction.

The Visitor Center provides geothermal walls and floors, a green roof garden that absorbs water and captures carbon, and an efficient design. Additionally, working with Urban Architecture, the garden has also committed a dedicated effort towards utilizing soil to collect overflowing water that pressures the sewage system. The role of Botanic Gardens is indeed, more far-reaching than visually seen. I asked Barbara about the other ways BBG helps sustainability outside education and the visitor's center. She mentioned numerous insightful actions including converting to electricity machinery, leading compost education, lawn waste recycling and composting, and lobbying. Specifically,

the recent rezoning policy is constructing a 14-story building that would obstruct sunlight to the greenhouse and conservatory of the Botanic Garden. Subsequently, the "Fight For Sunlight" initiative aims to lobby the city council to disapprove of this rezoning policy adversely impacting the environmental stronghold of Botanic gardens. Gardens and parks are powerful components for the future of environmental protection. The garden's impact is extensive and sets a powerful example for the rest of us. In the future, our communities can support environmental sustainability through basic lifestyle changes like consumption, recycling, and lowering carbon emissions by taking public transit.



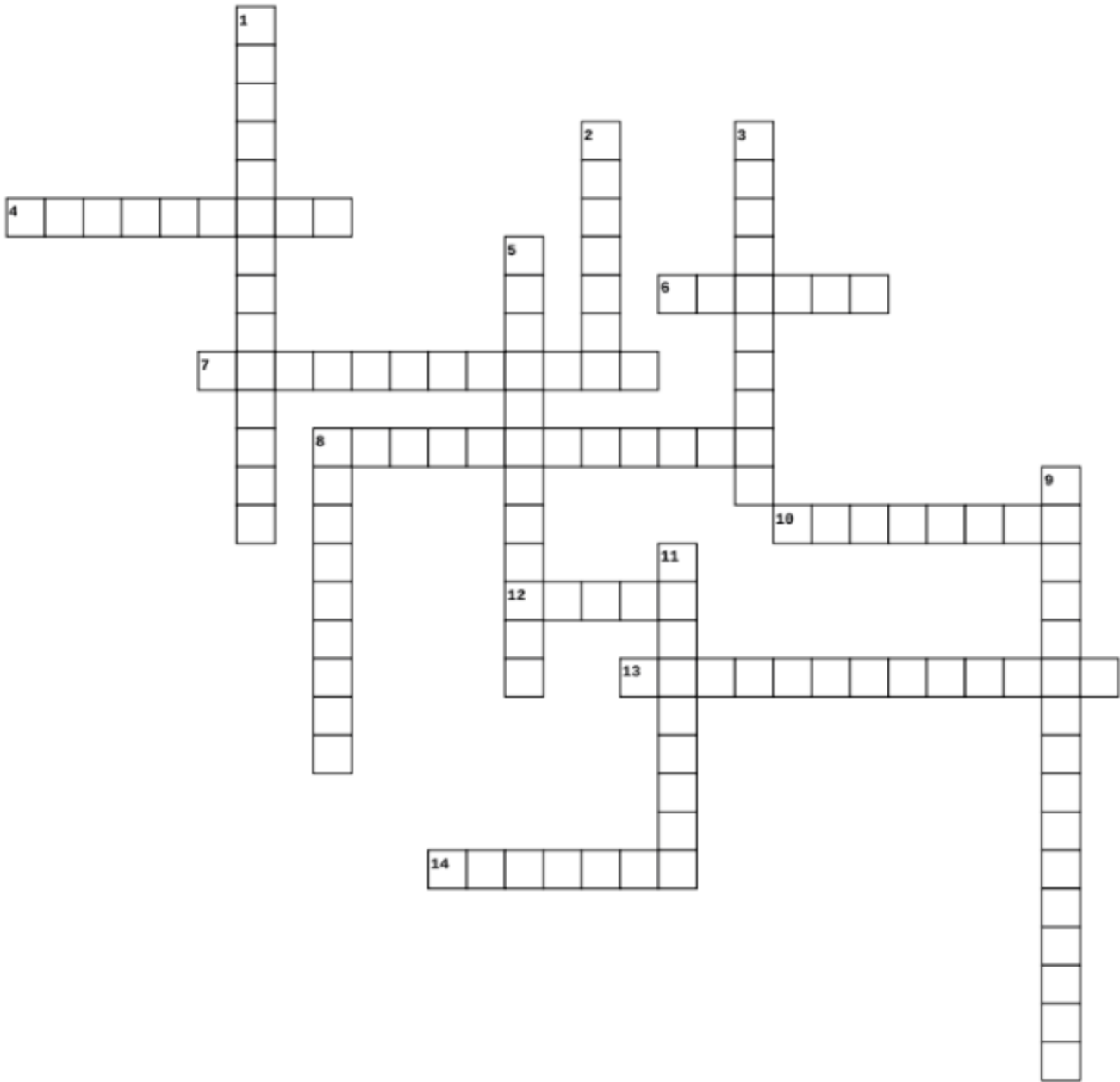
The Environmental Action Writing Team in the Rock Garden. From left to right: Andy, Victoria, Ihaka; bottom: Osei

AN INTERESTING PARALLEL: Mega Jail and "Fight for Sunlight"

By Andy Liu

The construction of the 14-story building remarkably resembles that of the mega-jail in Chinatown. Both buildings cast shadows, one of the interconnected nature of incarceration and social implications, and the other resembles the urban impact on the environmental nature of the country. Although serving different purposes, both are points for advocates to ponder more.

Sustainability Crossword



Across

- 4. Converting potential waste into resources.
- 6. A type of Japanese tree at the BBG.
- 7. Variety of life on Earth and Organisms.
- 8. Act of preserving something.
- 10. production or discharge of gas.

Down

- 1. the emphasis on conservation for long-term benefits of environment.
- 2. Decayed organic material as a fertilizer.
- 3. Advocating as a community to make change.
- 5. Space in BBG which preserves historical species of trees, flowers, and plants.

- 12. Layer of O3 protecting Earth from dangerous UV rays.
- 13. The process of continuous removal of trees.
- 14. Weather condition that has been susceptible to change.
- 8. Presence of harmful contaminate in the natural environment.
- 9. Action by organization aimed at protecting the environment.
- 11. Source of energy that is not depleted.